8753 Muralla Way - REVISED

City of El Paso — Plan Commission — 2/21/2019

PZRZ17-00014 Rezoning

STAFF CONTACT:	Anne Guayante, (915) 212-1814, guayanteam@elpasotexas.gov
OWNER:	Valle del Colibri, LLC.
REPRESENTATIVE:	Exigo Architects
LOCATION:	8753 Muralla Way, District 7
LEGAL DESCRIPTION:	Parcel 1: Tract 12-A, Block 6, Ysleta Grant, City of El Paso, El Paso County; Parcel 2: Tract 2, Ysleta Grant, City of El Paso, El Paso County; Parcel 3: Tract 3-B, Block 6, Ysleta Grant, City of El Paso, El Paso County, Texas
EXISTING ZONING:	R-3A/c (Residential/conditions)
REQUEST:	To rezone from R-3A/c (Residential/conditions) to A-O/c (Apartment Office/condition)
RELATED APPLICATIONS:	PZCR18-00001
PUBLIC INPUT	No public comment received. Notices sent to property owners within 300 feet on February 7, 2019
STAFF RECOMMENDATION:	Approval (see pages 2—4 for basis for recommendation)

SUMMARY OF REQUEST: The applicant requests a change in zoning from R-3A/c (Residential/conditions) to A-O (Apartment Office) for a proposed apartment complex.

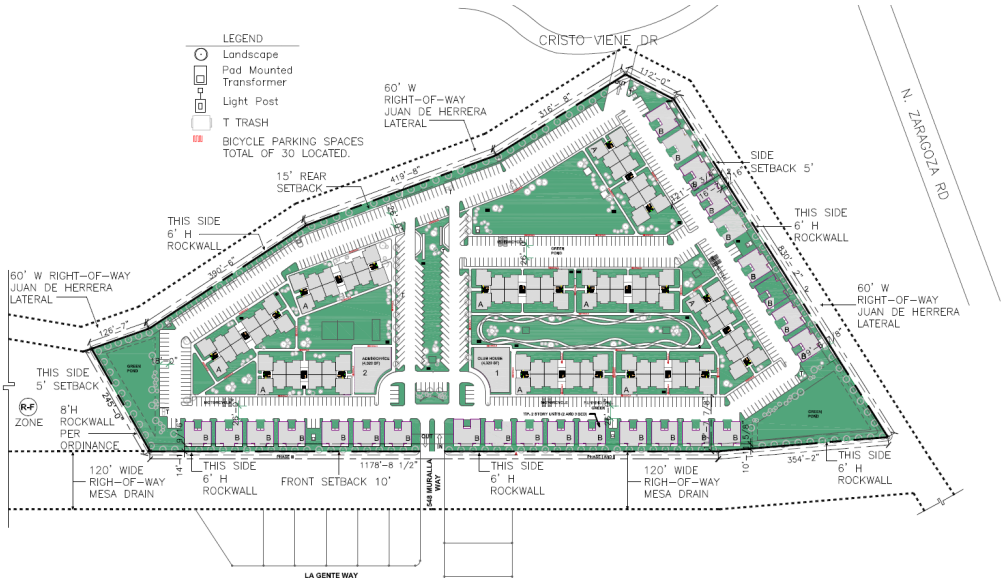
SUMMARY OF RECOMMENDATION: The Planning Division recommends **APPROVAL** of rezoning the property from R-3A/c (Residential/conditions) to A-O (Apartment Office). The proposed zoning district is consistent with other commercial and low- to medium-density residential districts and uses in the immediate area, and meets the established character of its surrounding neighborhood. Further, the proposed development meets the intent of the G-3 (Post-war) land use designation of Plan El Paso, the City's Comprehensive Plan.

DESCRIPTION OF REQUEST

The property owner is requesting to rezone the subject property from R-3A/c (Residential/conditions) to A-O/c (Apartment Office/condition) to accommodate an apartment complex. The property is currently vacant. The general concept plan shows an apartment complex with multiple two- and three-story buildings, administrative offices, and green space. The applicant is also requesting for the subject property to be released from a zoning condition that limits its density to ninety dwelling units.

The general concept for the proposed development appears capable of meeting the regulations of the A-O (Apartment-Office) District. Prior to development, it will need to demonstrate compliance with all applicable City codes. Due to the size of the subject property and its proximity to North Loop, a Traffic Impact Analysis was required to be approved by both the City of El Paso and the Texas Department of Transportation. Both agencies concurred with the findings of that report. Access to the subject property will be via Muralla Way and Cristo Viene way. Bridges will need to be constructed over irrigation laterals to provide access to both of those streets.

GENERAL CONCEPT PLAN:



REZONING POLICY

POLICY	DOES IT COMPLY?
Compatibility Proposed zone change matches existing land use map or matches existing land use designation within 300 ft. of the subject property.	Yes, the proposed zoning district is consistent with those of adjacent properties and supports uses compatible with its surroundings. One property directly abutting the subject property is zoned A-O (Apartment Office), which is the requested district. Other adjacent properties are zoned C-2 (Commercial), A-2 (Apartment), R-3 (Residential), and R-F (Ranch and Farm).
Plan El Paso **Policy 2.2.2:** The design of new neighborhoods and additions to existing neighborhoods should strive for a mix of housing types to create neighborhoods that accommodate diverse ages and incomes and allow residents to trade up, downsize, or create multi-generational households without being forced to leave the neighborhood. Housing types include both small and large single-family detached homes, duplexes, townhouses, multi-family buildings, live-work units, and accessory dwelling units, and include both rental apartments and units that can be owned by their occupants.	Yes, the property is designated G-3, Post-War and meets the intent by proposing to increase the supply of multi-family housing within an established neighborhood consisting of single-family housing stock, some multi-family housing stock, and commercial uses.

NEIGHBORHOOD CHARACTER AND COMPATIBILITY: The subject property is located adjacent to the terminus of Muralla way, approximately one block north of North Loop, which is a major arterial road. Muralla is a local street with single-family residences along both of its borders. East of the subject property, but not abutting it, is Zaragoza, which is also a major arterial road. The subject property is unplatted and vacant. It is surrounded by irrigation canals on two sides. Surrounding properties were platted in 1973 (residential), 1992 (multi-family), 1995 (commercial), and 2000 (commercial). There is some remaining, developed land in tract form, which is zoned R-F (Ranch and Farm). This land is mainly residential, though the subject property is adjacent to an uplatted church beyond the northern irrigation canal. According to aerial photographs, the configuration of the established neighborhood was largely in existence by 2002, with the single-family and multi-family development present in at least 1997. The proposed rezoning of the subject property would allow for an increase in the number of available multi-family residential dwelling units that is consistent

RELATION OF PROPOSED CHANGE TO THE CITY'S COMPREHENSIVE PLAN

CONSISTENCY WITH PLAN EL PASO	DOES IT COMPLY?
G-3 Post-War: This sector applies to transitional neighborhoods typically developed from the 1950s through the 1980s. Streets were laid out with curvilinear patterns without alleys and shopping centers are located at major intersections behind large parking lots. This sector is generally stable but would benefit from strategic suburban retrofits to supplement the limited housing stock and add missing civic and commercial uses.	The proposed zoning district allows for development that is consistent with the character of the G-3 (Post-War) Future Land Use designation, and will further the goals of this growth sector by supplementing the limiting housing stock and augment the available housing types within its established neighborhood.
ZONING DISTRICT	DOES IT COMPLY?

A-O (Apartment-Office) The purpose of this district is to promote and preserve residential development within the city associated with a landscape more urban in appearance and permitting a mixture of housing types. It is intended that the district regulations allow for medium densities of dwelling units supported by higher intensity land uses located at the periphery of single-family neighborhoods providing that the overall character and architectural integrity of the neighborhood is preserved. The regulations of the district will permit building types designed for transition from areas of low density residential neighborhoods to other residential areas, and certain nonresidential uses and support facilities.	The proposed apartment use is allowed within the proposed Apartment-Office District, and the development meets the intent of the proposed district.

SUITABILITY OF SITE FOR USES UNDER CURRENT ZONING: The shape and irrigation channels of the subject property make it difficult to develop.

SUITABILITY OF SITE FOR USES UNDER PROPOSED ZONING: The proposed use of the subject property is permitted in the A-O (Apartment-Office) District, and the site could accommodate the dimensional requirements for the proposed use.

CONSISTENCY WITH INTENT AND PURPOSE OF THE ZONING ORDINANCE: The intent of the Zoning Ordinance is to protect the public health, safety, and general welfare; to regulate the use of land and buildings within zoning districts to ensure compatibility, and to protect property values. The intent of the A-O (Apartment-Office) District is to that the district regulations allow for medium densities of dwelling units supported by higher intensity land uses located at the periphery of single-family neighborhoods providing that the overall character and architectural integrity of the neighborhood is preserved. The proposed rezoning would augment the limited multi-family housing stock present within its neighborhood and provide a transition between the single family and commercial and civic uses bordering the subject property.

ADEQUACY OF PUBLIC FACILITIES AND SERVICES: The proposed improvements were reviewed for adequacy of the existing infrastructure. The infrastructure was found to be capable of being extended to support the proposed development. Following rezoning, during the subdivision phase, bridges will need to be constructed for vehicular and emergency access, and utility lines will need to be extended to reach the subject property. Coordination will be required with the Irrigation District due to the presence of two irrigation channels bordering the subject property.

EFFECT UPON THE NATURAL ENVIRONMENT: The subject property is not within an arroyo or environmentally sensitive area.

COMMENT FROM THE PUBLIC: The subject property falls within the boundary of the Mission Valley Civic Association. They were contacted as required by 20.04.520. Notice of a Public Hearing was mailed to all property owners within 300 feet of the subject property on February 7, 2019. The Planning Division has received no public comment in support of or opposition to the request.

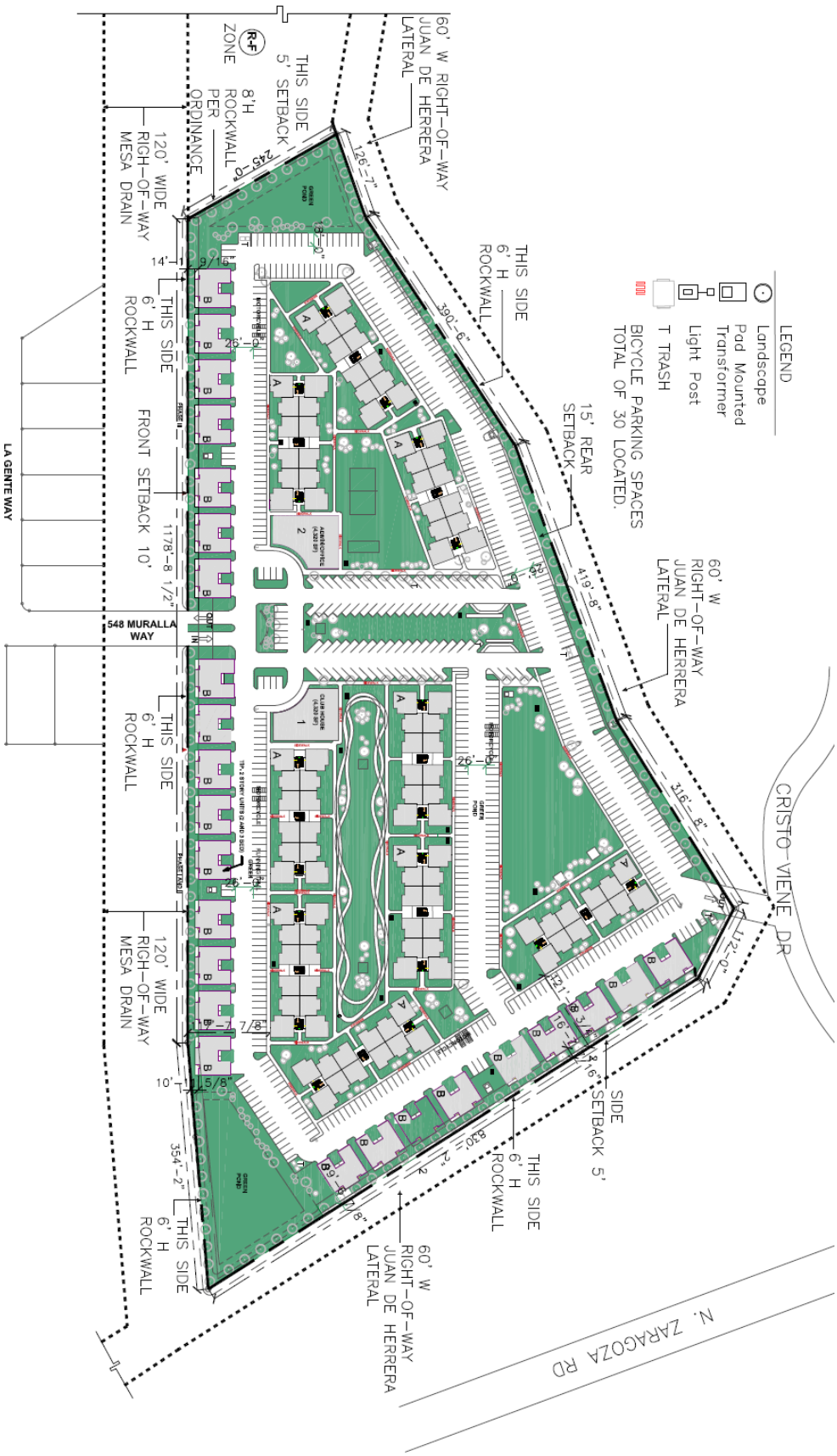
STAFF COMMENTS: No objections to proposed rezoning. No reviewing departments had any negative comments. Platting, extension of utility lines, and construction of vehicle access bridges will be required prior to development. Applicant is responsible for obtaining all applicable permits and approvals prior to any construction or change in occupancy.

OTHER APPLICABLE FACTORS: Approval of the site plans by CPC constitutes a determination that the applicant is in compliance with the minimum provisions. Applicant is responsible for the adequacy of such plans, insuring that stormwater is in compliance with ordinances, codes, DSC, and DDM. Failure to comply may require the applicant to seek re-approval of the site plans from CPC.

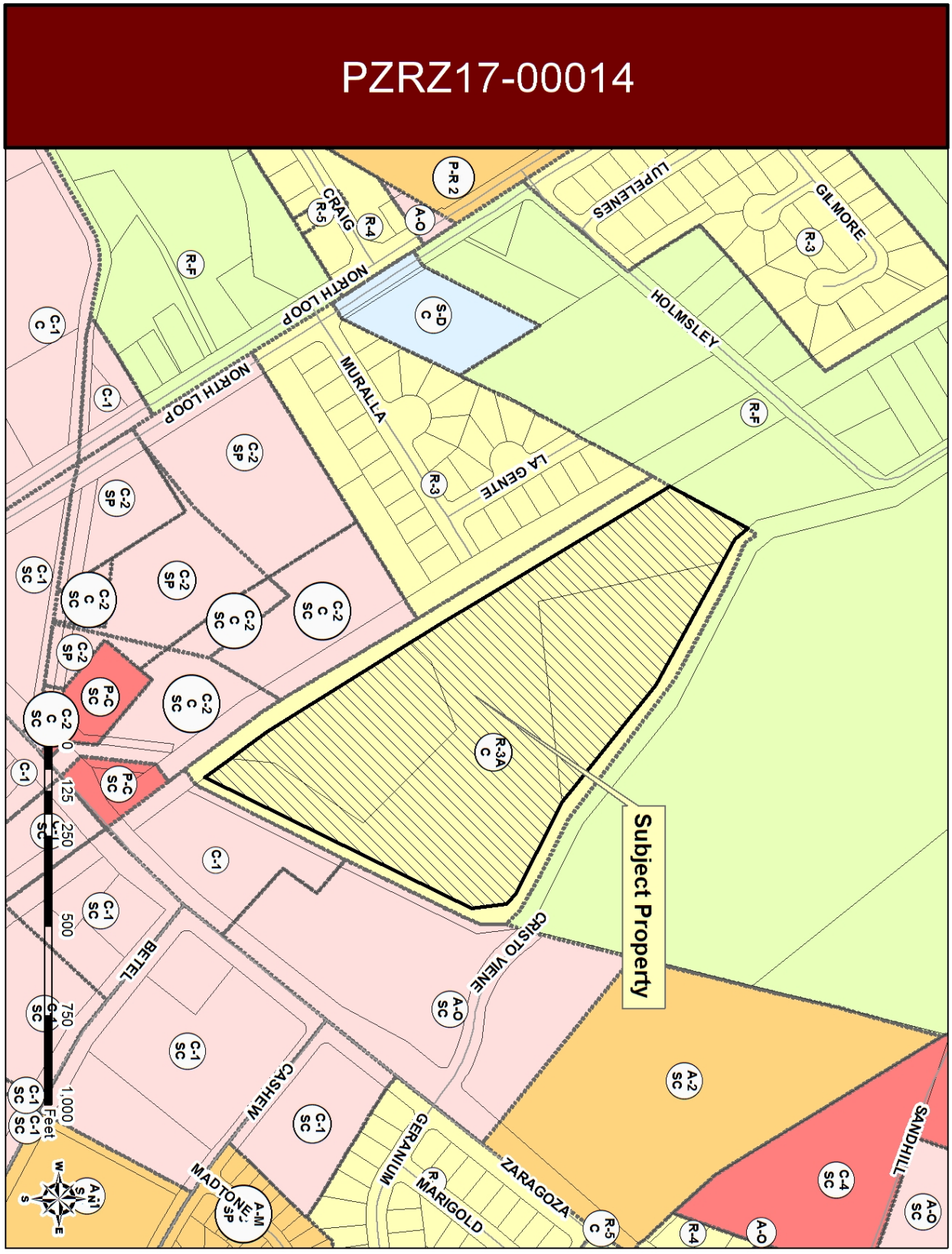
ATTACHMENTS:

1. Site Plan
2. Zoning Map
3. Comprehensive Plan Map
4. Department Comments
5. Neighborhood Notification Boundary Map
6. Neighborhood Association Letters
7. Letters from the Public

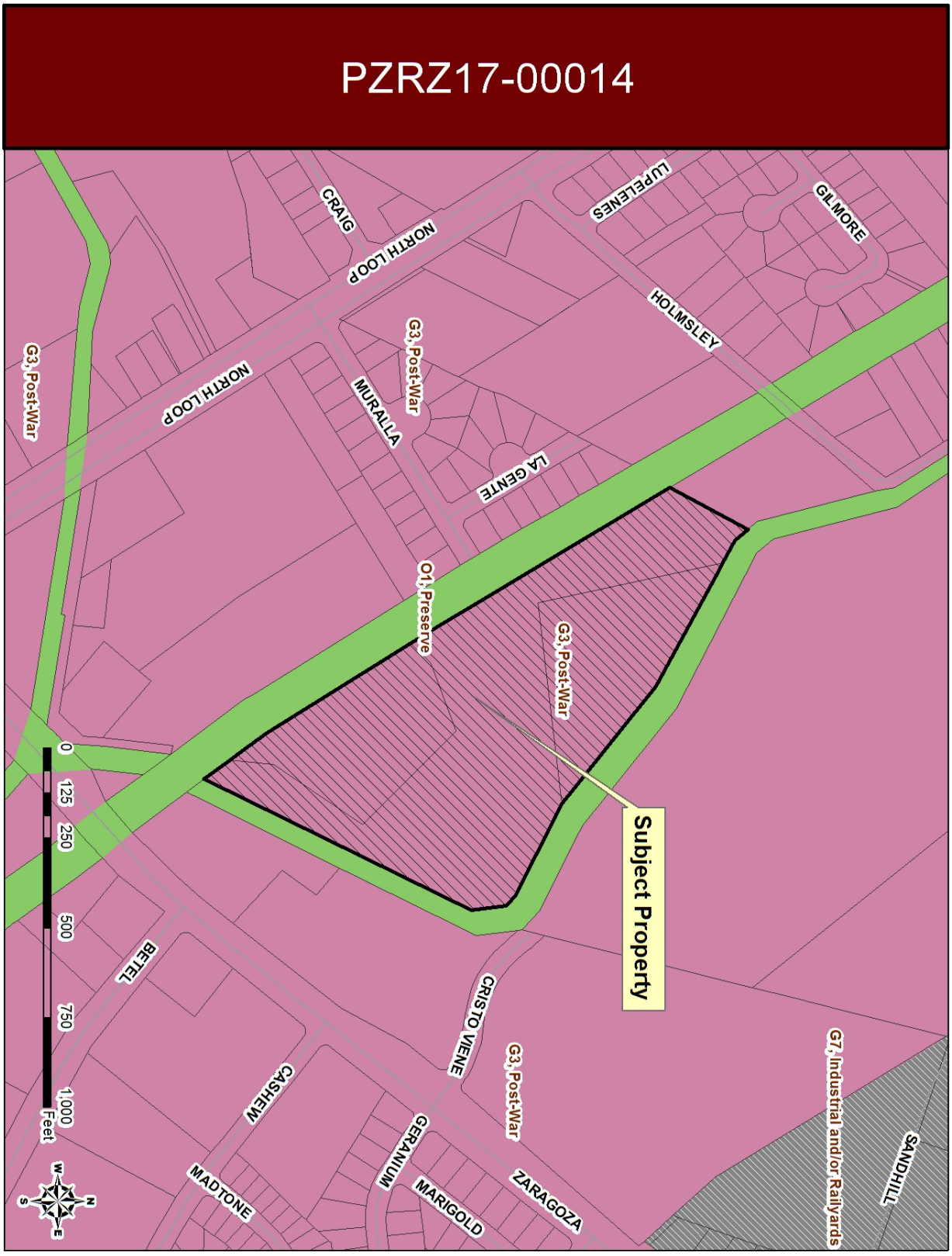
ATTACHMEN T 1: SITE PLAN



ATTACHMENT 2: ZONING MAP



ATTACHMENT 3: FUTURE LAND USE MAP



ATTACHMENT 4: DEPARTMENT COMMENTS

Planning and Inspections Department - Planning Division

1. The subject property is currently three separate lots. Platting will be required prior to the issuance of building permits.
2. Note that the A-O District allows a maximum 50% lot coverage.
3. The administrative office portion of the development will require 1 parking stall per 576 square feet of office use. The community center portion will require 1 parking space per 475 feet of that use.

Texas Department of Transportation

Concurs with TIA as updated

Planning and Inspections Department – Plan Review & Landscaping Division

Recommend approval. Proposed development shall comply with adopted codes at the time of submittal.

Planning and Inspections Department – Land Development

1. No objections to the proposed release of conditions.

Fire Department

Fire recommends approval.

1. All buildings proposed to be over 30 feet in height shall comply with Section D105 – Aerial Fire Apparatus Access Roads, D105.3 Proximity to Building. At least one the required access routes meeting this condition shall be located within a minimum of 15 feet and a maximum of 30 feet from the building and Fire Apparatus Access Roads Section 503.1.1 – Buildings and Facilities of the International Fire Code 2015.
2. For the site plan review, other than weight requirements over the canal in the back of the project, I'd say yes [comment 1 addresses Fire's concerns]. Streets will review the access from North Loop issue and possibly the canal issue in the rear. The weight requirements for bridging the canal are pretty important.

Police Department

No comments. Thank you for the opportunity.

Sun Metro

No objections.

El Paso Water Utilities

We have reviewed the zoning change request described above and provide the following comments:

1. Within the Mesa Drain right-of-way there is an existing forty-two (42) inch diameter sanitary sewer interceptor. If service to this Property will be provided from this main, sanitary sewer main extensions will be required to discharge into an existing manhole pertaining to the 42-inch diameter interceptor. The main is further described in the sanitary sewer portion of these comments.
2. Due to this proposed development, the existing six (6) inch diameter water main located along Muralla Way requires to be upgraded to an eight (8) inch diameter main. Similarly, in the event that service may be obtained from the existing six (6) inch diameter main that extends along Holmsley Trail, EPWater requires for the 6 inch diameter water main to be upgraded to eight (8) inches in diameter. Both water mains are further described in the water portion of these comments.
3. EPWater does not object to this request.

EPWU-PSB Comments

4. From the intersection of Muralla Way and La Gente Way along Muralla Way there is an existing six (6) inch diameter water main. This main dead-ends at approximately 104 feet north of La Gente Way.
5. Along Holmsley Trail Drive between Mesa Drain and the Juan De Herrera Lateral there is an existing six (6) inch diameter water main.
6. From the intersection of Cristo Viene Drive (formerly Geranium Drive) and Zaragoza Road along Cristo Viene Drive towards the west there is an existing eight (8) inch diameter water main. This main dead-ends approximately 465 feet west of Zaragoza Road.
7. Previous water pressure readings conducted on fire hydrant number 360 located at the corner of Muralla Way and La Gente Way have yielded a static pressure of 110 pounds per square inch (psi), residual pressure of 106 psi, discharge of 1,061 gallons per minute (gpm).
8. Previous water pressure readings conducted on fire hydrant number 5038 located along Cristo Viene Drive approximately 300 feet west of Zaragoza Road have yielded a static pressure of 100 pounds per square inch (psi), residual pressure of 80 psi, discharge of 1,300 gallons per minute (gpm).
9. The owner should, for his own protection and at his own expense, install at the discharge side of each water meter a pressure regulator, strainer and relief valve, to be set for pressure as desired by the customer. The Owner shall be responsible for the operation and maintenance of the above-described water pressure regulating device.

Sanitary Sewer

10. From the intersection of Muralla Way and La Gente Way along Muralla Way there is an existing eight (8) inch diameter sanitary sewer main. This main dead-ends at approximately 80 feet north of La Gente Way. The depth of this main at the dead-end point is three (3) vertical feet approximately.

11. Along Holmsley Trail Drive between Mesa Drain and the Juan De Herrera Lateral there is an existing twelve (12) inch diameter sanitary sewer main.
12. From the intersection of Cristo Viene Drive (formerly Geranium Drive) and Zaragoza Road along Cristo Viene Drive towards the west there is an existing eight (8) inch diameter sanitary sewer main. This main dead-ends at approximately 475 feet west of Zaragoza Road.
13. Within the Mesa Drain right-of-way there is an existing forty-two (42) inch diameter sanitary sewer interceptor. This main is located approximately 35 feet north of the Mesa Drain center line. No direct service connections are allowed to this main as per the El Paso Water - Public Service Board Rules & Regulations. In the event that service to this Property may be available from this main, sanitary sewer main extensions will be required to discharge into an existing manhole pertaining to the 42-inch diameter interceptor. The design of the proposed sanitary sewer collection system to serve this property will enable discharge(s) to the sanitary sewer manhole(s) pertaining to the described 42-inch diameter interceptor.

General

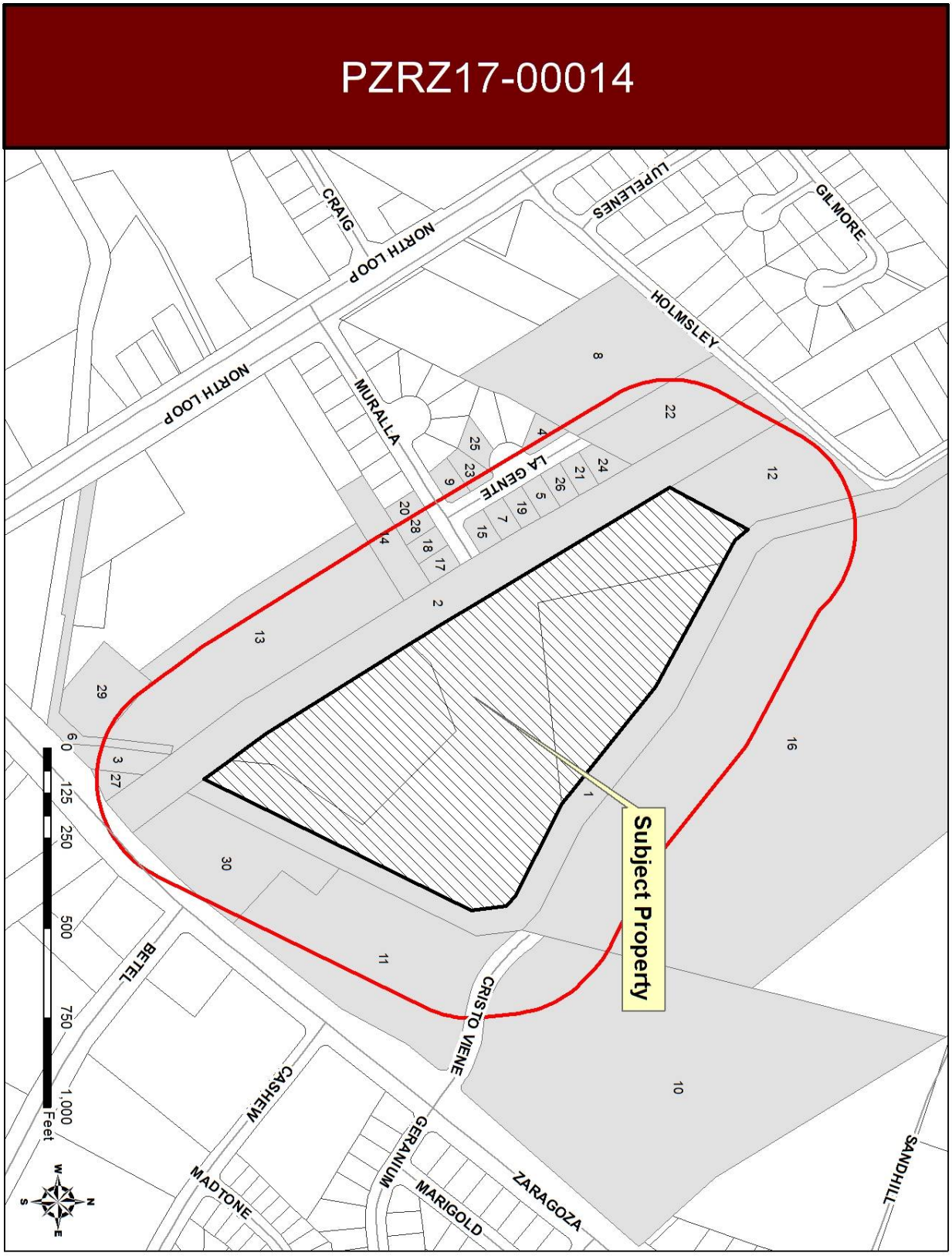
14. Permits from the El Paso County Water Improvement District No. 1 (EPCWID No. 1) will be required for the proposed water and/or sanitary sewer facilities construction within the Mesa Drain right-of-way and the Juan De Herrera right-of-way. The Owner/Developer will be responsible for all costs associated with the acquisition of the EPCWID No. 1 permits.
15. De-watering may be required to enable the construction of water mains, sanitary sewer mains and related appurtenant structures. All costs associated with the acquisition of de-watering permits, de-watering discharge fees and all de-watering costs are the responsibility of the Owner/Developer.
16. Due to this proposed development, the described existing water main located along Muralla Way requires upgrading to eight (8) inch diameter. This upgrade will commence from North Loop Drive to the subject Property. All costs associated with the required water main upgrade are the responsibility of the Owner/Developer. Water service is anticipated to be provided by means of extensions from the proposed main located along Muralla Way and the existing main located along Cristo Viene Drive.
17. In the event that water and/or sanitary sewer main extension would be required from the described existing water and sanitary sewer mains located along Holmsley Trail Drive, easements within the properties located west of this development (Tract 10B-1 and Tract 10-B, Ysleta Grant) will be required. Similarly, EPWater requires for the existing six (6) inch diameter water main that extends along Holmsley Trail to be upgraded to eight (8) inches in diameter.
18. The Developer is responsible for the acquisition of all off-site and on-site easements and all costs associated with the easement acquisitions.
19. All easements dedicated for public water and/or sanitary sewer facilities are to comply with EPWater-PSB Easement Policy.
20. Easement grantor shall indemnify, defend, and hold harmless the El Paso Water – Public Service Board from and against any and all claims, liability, actions, and damages for bodily injury and property damage to third parties or to the El Paso Water – Public Service Board which may be caused by or arise out of the maintenance and existence of said water and sanitary sewer mains in the easement area.

21. The alignment and location of the proposed EPWater-PSB easement shall enable the placement of water meters outside of the parking areas and minimize the length of services. No vehicular traffic is allowed over the water meters. EPWater-PSB requires access to the proposed water, sanitary sewer facilities, appurtenances, and meters within easements 24 hours a day, seven (7) days a week.
22. No building, reservoir, structure or other improvement, other than asphaltic paving (HMAC), shall be constructed or maintained on the above referenced El Paso Water - Public Service Board Easements without the written consent of EPWater-PSB.
23. The PSB easement shall be improved to allow the operation of EPWater maintenance vehicles.
24. Proposed surface improvements such as paving, landscaping, other types of low maintenance surfacing shall be reviewed for approval by EPWater-PSB.
25. Use of low maintenance easement surface improvements is required. The Owner of the property is responsible for maintenance of the easement surface; surface maintenance is not the responsibility of EPWater-PSB.
26. EPWater-PSB requests the Developer to refrain from constructing rock walls or any structure that will interfere with the access to the PSB easements.
27. EPWater-PSB requests the Developer to refrain from constructing signs within the PSB easements.
28. EPWater requires a new service application to initialize design of the water and sanitary sewer main extensions to serve the subject property. New service applications are available at 1154 Hawkins, 3rd Floor. The following items are required at the time of application: (1) hard copy of subdivision plat; (2) finalized set of street improvement plans, including storm sewer; (3) digital copy of subdivision plat; (4) benchmark check; and (5) construction schedule. Service will be provided in accordance with the current EPWater – PSB Rules and Regulations. The owner is responsible for the costs of any necessary on-site and off-site extensions, relocations or adjustments of water and sanitary sewer lines and appurtenances.

Stormwater:

29. We have reviewed the property described above and provide the following comments:
30. This development has been seen under the 5-Day review under the name of Valle Del Colibri.
31. Any development within Special Flood Hazard Areas shall comply with Section 18.60 - Flood Damage Prevention and Section 19.19 - Stormwater Management Requirements of the City of El Paso's municipal code.
32. On the Drainage Plan, provide the capacity of the proposed ponds: any ponding area shall have enough capacity to hold the developed runoff for a designed 100-yr storm event.
33. EPW - Stormwater Engineering recommends using principles of low impact & green infrastructure development (such as recessed landscaping, rainwater harvesting, and porous pavements) to reduce the amount of developed stormwater runoff and to mitigate adverse downstream drainage conditions.

ATTACHMENT 5: OWNER NOTIFICATION MAP



ATTACHMENT 6: TRAFFIC IMPACT ANALYSIS

See following pages.

VALLE DEL COLIBRI

North Loop Drive and Zaragoza Road

TRAFFIC IMPACT ANALYSIS

Project No. 16-002

Prepared by:

GRV Integrated Engineering Solutions LLC

TBPE F#15313

May 31, 2016

This Report is released for Review Only.

This report is not intended for environmental clearance, design, bidding or construction purposes.

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Appendix A– Trip Generation Computer Output

Appendix B – HCM Arterial Analysis Computer Printouts

Appendix C – HCM Intersection Analysis Computer Printouts

Appendix D – Peak Hour Counts Collected (Raw Data)

This report is not intended for environmental clearance, design, bidding or construction purposes.

These documents were prepared by or under the supervision of:

Marvin H. Gomez, P.E., PTOE, CFM, CNU-A

Texas PE #86920

REPORT RELEASED FOR REVIEW ONLY.

1.0 INTRODUCTION

GRV Integrated Engineering Solutions LLC (GRV) has been contracted by the owner of Valle Del Colibri, LLC to prepare this traffic impact analysis (TIA) for an undeveloped parcel of land containing 18 acres and located at the northwest quadrant of North Loop Drive and Zaragoza Road (8753 North Loop Drive) within the limits of the City of El Paso, Texas. The property is proposed to be developed with mixed land uses containing a park, residential and commercial land uses. The legal description of the subject property is known as 6 Ysleta Tract 12-A, City of El Paso, El Paso County, Texas. Refer to **Exhibit 1** for the project location.

OBJECTIVE AND PROJECT APPROACH

The objective of this TIA is to determine the traffic impact to the existing roadways and intersections located within a half mile radius of the 18 acre mixed land use development. The traffic analysis was prepared based on the following assumptions: 1) 360 apartment units (220); 10,800 square foot day care (565); 9,600 square foot general office (710); and 9,600 square foot medical office (720). In order to determine the traffic impact on the existing roadway network, the traffic analysis was conducted assuming three scenarios. Scenario 1 consisted of the traffic analysis without the new mixed land use development. Scenario 2 consisted of the traffic analysis with the new mixed land use development opening sometime in the Year 2018. Finally, Scenario 3 consisted of the traffic analysis with the new mixed land use development full build-out by 2020.

Based on the City of El Paso ordinance Amendment to Title 19 Traffic Impact Analysis, the recommendations from the City of El Paso Streets and Maintenance Department and the trips generated during the peak hour by the new development, it was determined that the 2 access driveways, and eight (8) major signalized intersections (Rabe/Zaragoza, Commercial Driveway/Zaragoza, North Loop/Zaragoza, Betel/Zaragoza, Cristo Viene/Zaragoza, Escobar/Zaragoza, Warwick/North Loop, and Muralla/North Loop) would be analyzed.

In order to prepare this TIA report, the analysis required to collect the existing traffic counts, determine projected traffic counts for the Years 2018 and 2020, compute existing level of service (LOS), and compute the projected LOS for the following roadway network:

1. Extend of the traffic study was based on a 0.5 mile radius from the site.
2. Segment Analysis was conducted along Zaragoza Road from Escobar Drive to a commercial driveway south of North Loop Drive.
3. Segment Analysis was conducted along North Loop Drive from Muralla Way to Warwick Road.
4. Intersection Analysis was conducted for Rabe/Zaragoza, Commercial Driveway/Zaragoza, North Loop/Zaragoza, Betel/Zaragoza, Cristo Viene/Zaragoza, Escobar/Zaragoza, Warwick/North Loop, and Muralla/North Loop.
5. The two access points/driveways required for the site.

Also, an inventory of the existing conditions was performed to determine the following for the roadway network (segments and intersections): **Signalized intersections (timing plans); Traffic control devices (all-way stop intersections); Posted speed limits; Roadway geometric features (number of lanes, shoulder widths, horizontal and vertical curvature, median type, right-of-way width, lateral clearances); Existing access in vicinity of site; Pedestrian and bicycle facilities; Driveways across from site; and Adjacent land use.**

Peak hour traffic counts were collected at the 8 intersections (Rabe/Zaragoza, Commercial Driveway/Zaragoza, North Loop/Zaragoza, Betel/Zaragoza, Cristo Viene/Zaragoza, Escobar/Zaragoza, Warwick/North Loop, and Muralla/North Loop). The peak hour counts were collected on May 10, 11 and 12, 2016 during the AM Peak (6:30 AM to 8:30 AM) and PM Peak (3:30 PM to 6:30 PM) hours. Refer to **Exhibit 2** for the location and summary of existing peak hour traffic counts. Refer to **Appendix D** for the raw data.

Table 1 summarizes the peak hour counts for the intersections that were analyzed for this study.

Table 1 – Existing Peak Hour Counts (May 10, 11 & 12, 2016)

Intersection ID	Intersection	AM Peak Hour Volume (veh/hr)	PM Peak Hour Volume (veh/hr)
1	Rabe Ct. – Zaragoza Rd.	1,454	1,788
2	Commercial – Zaragoza Rd.	1,039	1,943
3	North Loop Dr. – Zaragoza Rd.	3,555	4,149
4	Betel Dr. – Zaragoza Rd.	2,418	2,801
5	Cristo Viene Dr. – Zaragoza Rd.	2,250	2,906
6	Escobar Dr. – Zaragoza Rd.	2,320	2,419
7	Warwick Rd. – North Loop Dr.	2,029	2,324
8	Muralla Way – North Loop Dr.	2,155	2,368

2.0 EXISTING TRAFFIC CONDITIONS

Multiple site visits were performed to investigate the existing traffic conditions and document the land use characteristics of the traffic study area. The new mixed land use development is surrounded by dense commercial centers. Two access points (one driveway off Cristo Viene Drive and one off Muralla Way) are proposed for the new mixed land use development. The closest signalized intersection to the site is located at the Cristo Viene/Zaragoza intersection. **Table 2** summarizes the geometric features of the existing roadways analyzed for this study:

Table 2 – Existing Roadway Geometric Features

Roadway Section	Section Length	# Lanes	Lane Width	Median	Speed Limit	Shoulder Width	ROW
	(mile)		(ft)		(mph)	(ft)	(ft)
Zaragoza (Rabe to Commercial)	0.15	4	10'-12'	TWLTL	45	-	95'
Zaragoza (Commercial to North Loop)	0.14	4	10'-12'	TWLTL	45	-	95'
Zaragoza (North Loop to Betel)	0.23	4	12'-14'	TWLTL	45	-	120'
Zaragoza (Betel to Cristo Viene)	0.17	4	12'-14'	TWLTL	45	-	100'
Zaragoza (Cristo Viene to Escobar)	0.39	4	12'-14'	TWLTL	45	-	110'
North Loop (Zaragoza to Warwick)	0.37	4	11'-13'	Divided	40	10'	150'
North Loop (Muralla to Zaragoza)	0.27	4	11'-13'	Divided	40	10'	125'

TWLTL – TWO WAY LEFT TURN LANE

Existing traffic volumes for the area were also obtained from the Texas Department of Transportation (TxDOT), and the El Paso Metropolitan Planning Organization (MPO). TxDOT publishes traffic maps every year summarizing the annualized average daily traffic from 2009 to 2012 for the roadways under their jurisdiction. The El Paso MPO traffic data is based on the Horizon 2040 Metropolitan Transportation Plan TransCAD Model based on the base year (2007 and 2010), and traffic projections models for 2020, 2030, and 2040. **Table 3** and **4** summarized the traffic information gathered from these various sources.

Table 3 – Available Existing Traffic Volumes from TxDOT

TXDOT HISTORICAL TRAFFIC DATA		
Year	**Roadways**	**Volumes (AADT)**
2007	Zaragoza Rd. South of North Loop Dr.	29230
2007	Zaragoza Rd. North of North Loop Dr.	33230
2007	North Loop Dr. West of Zaragoza Rd.	23000
2007	North Loop Dr. East of Zaragoza Rd.	21000
2007	Warwick Dr. North of North Loop Rd.	5520
2009	Zaragoza Rd. North of North Loop Dr.	29000
2009	North Loop Dr. West of Zaragoza Rd.	21000
2009	North Loop Dr. East of Zaragoza Rd.	22000
2010	Zaragoza Rd. North of North Loop Dr.	28000
2010	North Loop Dr. West of Zaragoza Rd.	23000
2010	North Loop Dr. East of Zaragoza Rd.	22000
2011	Zaragoza Rd. North of North Loop Dr.	29000
2011	North Loop Dr. West of Zaragoza Rd.	24000
2011	North Loop Dr. East of Zaragoza Rd.	24000
2012	Zaragoza Rd. North of North Loop Dr.	28000
2012	North Loop Dr. West of Zaragoza Rd.	25000
2012	North Loop Dr. East of Zaragoza Rd.	25000
2013	Zaragoza Rd. North of North Loop Dr.	28569
2013	North Loop Dr. West of Zaragoza Rd.	20768
2013	North Loop Dr. East of Zaragoza Rd.	21099
2014	Zaragoza Rd. North of North Loop Dr.	21562
2014	North Loop Dr. West of Zaragoza Rd.	18666
2014	North Loop Dr. East of Zaragoza Rd.	18632

Table 4 – Available Existing Traffic Volumes from the El Paso MPO

EL PASO MPO - HORIZON 2040				
LOCATION	**YEAR (ADT)**			
	2007	**2010**	**2020**	**2030**
Rabe Ct. West of Zaragoza Rd.	8039	5613	8741	9109
Rabe Ct. West of Zaragoza Rd.	277	204	487	531
Zaragoza Rd. North of Rabe Ct.	15087	12349	14927	15972
Zaragoza Rd. South of Rabe Ct.	12078	10280	12356	12192
North Loop Dr. West of Zaragoza Rd.	15378	16146	14873	16088
North Loop Dr. East of Zaragoza Rd.	21059	21269	20150	21231
Zaragoza Rd. North of North Loop Dr.	15087	12349	14927	15972
Zaragoza Rd. South of North Loop Dr.	12078	10280	12356	12192
Betel Dr. East of Zaragoza Rd.	20	319	951	1170
Zaragoza Rd. North of Betel Dr.	17462	16945	17387	18545
Zaragoza Rd. South of Betel Dr.	17474	16910	17637	18723
Escobar Dr. West of Zaragoza Rd.	1000	1366	1669	1927
Escobar Dr. East of Zaragoza Rd.	8494	8620	8732	9763
Zaragoza Rd. North of Escobar Dr.	20626	21018	20465	21136
Zaragoza Rd. South of Escobar Dr.	17462	16945	17387	18545
North Loop Dr. West of Warwick Rd.	21059	21269	20150	21231
North Loop Dr. East of Warwick Rd.	16531	17193	16577	17683
Warwick Rd. North of North Loop Dr.	8141	8335	8084	8766
Warwick Rd. South of North Loop Dr.	6070	7303	9174	9726

3.0 TRAFFIC PROJECTIONS, TRIP DISTRIBUTION, AND TRIP ASSIGNMENT

The projected peak hour (vehicles per hour) traffic volumes for the new mixed land use development were approximated based on the Institute of Transportation Engineers (ITE) Trip Generation Manual (9th Edition). The projected traffic volumes are based on ITE's land use number 220 for the 360 apartment units, 565 for the 10,800 SF day care, 710 for the 9,600 SF general office, and 720 for the 9,600 SF medical office. For the purpose of this study, the proposed mixed land use development would open in the Year 2018 and the property is assumed to be fully developed by the end of the Year 2020. The computed projected traffic volumes for the two access points to the site are summarized in **Table 5**. Refer to **Appendix A** for the Trip Generation computer output files and refer to **Exhibits 3A, 3A-1, 3B, 3B-1** for the diagram of the trip distributions and assignments.

Table 5 – Trip Generation and Distribution for the New Mixed Land Use Development

Access Point	Daily Volume		Peak Hour Volume (veh/hour)			
	veh/day		2018		2020	
	2018	2020	AM	PM	AM	PM
Driveway #1Muralla	768		54		89	
Driveway #2 Cristo Viene	385		36		19	

The traffic data collected on May 10, 11 and 12, 2016 is the base traffic data (Peak Hour movement counts) and these traffic counts are projected for the years 2018 and 2020 utilizing a growth rate of 3% per year in the compound annual rate formula [Projected Volume = (Present Traffic Volume)*$(1+R)^N$, N-number of projected years, R-growth rate].

Refer to Exhibit 4 and **Exhibit 7** for the projected peak hour volumes for 2018 and 2020 respectively based on the No-Build scenario.

Table 6 summarizes the trip assignment without the new mixed land use development.

Table 6 – Trip Assignment Summary Without the New Mixed Land Use Development

Intersection	Traffic Volumes (Veh/Hour)					
	2016		2018		2020	
	AM	PM	AM	PM	AM	PM
Rabe Ct. – Zaragoza Rd.	1,454	1,788	1,543	1,897	1,636	2,012
Commercial – Zaragoza Rd.	1,039	1,943	1,102	2,061	1,169	2,187
North Loop Dr. – Zaragoza Rd.	3,555	4,149	3,771	4,402	4,001	4,670
Betel Dr. – Zaragoza Rd.	2,418	2,801	2,565	2,972	2,721	3,153
Cristo Viene Dr. – Zaragoza Rd.	2,250	2,906	2,387	3,083	2,532	3,271
Escobar Dr. – Zaragoza Rd.	2,320	2,419	2,461	2,566	2,611	2,723
Warwick Rd. – North Loop Dr.	2,029	2,324	2,153	2,466	2,284	2,616
Muralla Way – North Loop Dr.	2,155	2,368	2,286	2,512	2,425	2,665

Table 7 summarizes the trip assignment for the new development and the surrounding streets that are impacted by the new mixed land use development.

Table 7 – Trip Assignment Summary With the New Mixed Land Use Development

Intersection	Traffic Volumes (Veh/Hour)					
	2016		2018		2020	
	AM	PM	AM	PM	AM	PM
Rabe Ct. – Zaragoza Rd.	-	-	1,562	1,921	1,717	2,116
Commercial – Zaragoza Rd.	-	-	1,123	2,086	1,253	2,296
North Loop Dr. – Zaragoza Rd.	-	-	3,815	4,454	4,176	4,897
Betel Dr. – Zaragoza Rd.	-	-	2,588	3,000	2,815	3,275
Cristo Viene Dr. – Zaragoza Rd.	-	-	2,428	3,119	2,677	3,450
Escobar Dr. – Zaragoza Rd.	-	-	2,483	2,592	2,697	2,834
Warwick Rd. – North Loop Dr.	-	-	2,175	2,493	2,375	2,734
Muralla Way – North Loop Dr.	-	-	2,340	2,601	2,682	3,016

Refer to Exhibits 5, 6, 8, 9 for the projected peak hour volumes for the Year 2018 based on opening the new mixed land use development by the Year 2018 and the full build-out by the Year 2020.

4.0 HIGHWAY CAPACITY MANUAL (HCM) ANALYSIS

Chapter 19 of the Subdivision Regulations requires that "In cases where the level-of-service of the roadway network without the development is below a level-of-service D, the proposed development shall not increase roadway intersection delay." LOS as described in the HCM is defined as a quality measure describing operational conditions in a traffic stream in terms of speed, travel time, freedom to maneuver or change lanes, traffic interruptions due to headway, comfort, and convenience. LOS is designated by the letters A to F with A representing the best free flow conditions and F the worst traffic conditions. LOS A or B is described as pleasant conditions, LOS C-D as marginal or tolerable traffic conditions, and LOS E-F as stop and go traffic conditions. The Highway Capacity Manual was utilized to analyze the roadway network impacted by the proposed Mixed Land Use development. The HCM analysis was conducted for the three scenarios: Scenario 1 consisted of the traffic analysis without the new mixed land use development, Scenario 2 consisted of the traffic analysis for the opening year 2018 of the new mixed land use development, and Scenario 3 consisted of the full build-out of the property by the Year 2020.

The roadway segments and intersections were analyzed for each analysis year using the Highway Capacity Manual (HCM). **Table 8** and **Table 9** summarized the HCM roadway segment analysis (Arterial Module) for each year for the AM and PM time periods. Refer to **Appendix B** for the HCM arterial analysis computer printouts.

Table 8 – HCM Roadway Segment Analysis (Without New Mixed Land Use Development)

Intersection	Analysis Year (LOS)					
	2016		2018		2020	
	AM	PM	AM	PM	AM	PM
Zaragoza (Rabe to Commercial Drwy)	D/B	D/B	D/B	D/B	D/C	D/B
Zaragoza (Commercial Drwy to North Loop)	F/C	F/D	F/C	F/D	F/C	F/D
Zaragoza (North Loop to Betel)	C/E	C/F	C/E	C/F	C/E	C/F
Zaragoza (Betel to Cristo Viene)	D/B	D/B	D/B	D/B	D/B	D/B
Zaragoza (Cristo Viene to Escobar)	B/B	B/C	B/B	B/C	B/B	B/C
North Loop (Zaragoza to Warwick)	F/A	E/A	F/A	E/A	F/A	E/A
North Loop (Muralla to Zaragoza)	B/B	B/B	B/B	B/C	B/B	B/C

*Level of Service is shown in NB/SB and WB/EB Directions.

Table 9 – HCM Roadway Segment Analysis (With New Mixed Land Use Development)

Intersection	Analysis Year (LOS)					
	2016		2018		2020	
	AM	PM	AM	PM	AM	PM
Zaragoza (Rabe to Commercial)	-	-	D/B	D/B	D/C	D/B
Zaragoza (Commercial Drwy to North Loop)	-	-	F/C	F/D	F/C	F/D
Zaragoza (North Loop to Betel)	-	-	C/E	C/F	C/E	C/F
Zaragoza (Betel to Cristo Viene)	-	-	D/B	D/B	D/B	D/B
Zaragoza (Cristo Viene to Escobar)	-	-	B/B	B/C	B/B	B/C
North Loop (Zaragoza to Warwick)	-	-	F/A	E/A	F/A	F/B
North Loop (Muralla to Zaragoza)	-	-	B/B	B/C	C/B	B/C

*Level of Service is shown in NB/SB and WB/EB Directions.

Table 10, Table 11, and **Table 12** summarizes the HCM intersection analysis for each year. Refer to **Appendix C** for the HCM intersection analysis computer printouts.

Table 10A – HCM Intersection LOS (Without New Mixed Land Use Development)

Intersection	Analysis Year (LOS)					
	2016		2018		2020	
	AM	PM	AM	PM	AM	PM
Rabe Ct. – Zaragoza Rd.	A	A	A	A	A	A
Commercial Drwy – Zaragoza Rd.	A	B	A	B	A	B
North Loop Dr. – Zaragoza Rd.	E	E	E	E	E	E
Betel Dr. – Zaragoza Rd.	F	E	F	E	F	E
Cristo Viene Dr. – Zaragoza Rd.	B	B	B	B	B	B
Escobar Dr. – Zaragoza Rd.	E	D	F	D	F	D
Warwick Rd. – North Loop Dr.	B	A	B	A	B	A
Muralla Way – North Loop Dr.	D	D	D	E	E	E

Table 10B – HCM Intersection LOS (With New Mixed Land Use Development)

Intersection	Analysis Year (LOS)					
	2016		2018		2020	
	AM	PM	AM	PM	AM	PM
Rabe Ct. – Zaragoza Rd.	-	-	A	A	A	A
Commercial Drwy – Zaragoza Rd.	-	-	A	B	A	B
North Loop Dr. – Zaragoza Rd.	-	-	E	E	F	F
Betel Dr. – Zaragoza Rd.	-	-	F	E	F	E
Cristo Viene Dr. – Zaragoza Rd.	-	-	B	B	C	C
Escobar Dr. – Zaragoza Rd.	-	-	E	D	F	D
Warwick Rd. – North Loop Dr.	-	-	B	A	B	A
Muralla Way – North Loop Dr.	-	-	F	F	F	F

Table 11A – HCM Intersection Delay (Without New Mixed Land Use Development)

Intersection	Analysis Year Intersection Delay (sec/veh)					
	2016		2018		2020	
	AM	PM	AM	PM	AM	PM
Rabe Ct. – Zaragoza Rd.	6.5	7.1	6.6	7.8	6.8	8.1
Commercial Drwy – Zaragoza Rd.	9.5	11.0	9.5	14.4	9.4	14.7
North Loop Dr. – Zaragoza Rd.	61.7	60.7	68.6	66.9	76.4	75.1
Betel Dr. – Zaragoza Rd.	87.4	55.4	96.5	61.3	105.7	67.3
Cristo Viene Dr. – Zaragoza Rd.	13.6	14.7	13.9	15.4	14.5	16.3
Escobar Dr. – Zaragoza Rd.	73.5	39.5	80.1	42.8	86.8	46.9
Warwick Rd. – North Loop Dr.	11.0	5.1	12.0	5.6	13.9	6.0
Muralla Way – North Loop Dr.	28.9	32.7	32.0	37.7	40.1	46.3

Table 11B – HCM Intersection Delay (With New Mixed Land Use Development)

Intersection	Analysis Year Intersection Delay (sec/veh)					
	2016		2018		2020	
	AM	PM	AM	PM	AM	PM
Rabe Ct. – Zaragoza Rd.	-	-	6.6	7.8	6.7	8.1
Commercial Drwy – Zaragoza Rd.	-	-	9.5	14.4	9.6	14.8
North Loop Dr. – Zaragoza Rd.	-	-	69.4	68.7	83.9	86.8
Betel Dr. – Zaragoza Rd.	-	-	95.7	61.2	104.2	67.4
Cristo Viene Dr. – Zaragoza Rd.	-	-	15.1	15.8	23.0	21.7
Escobar Dr. – Zaragoza Rd.	-	-	79.5	42.5	86.9	46.6
Warwick Rd. – North Loop Dr.	-	-	11.9	5.6	13.4	6.1
Muralla Way – North Loop Dr.	-	-	68.1	58.3	522.8	688.7

Table 12A – HCM Intersection Volume to Capacity Ratio (V/C) (Without New Mixed Land Use Development)

Intersection	Analysis Year Volume to Capacity (v/c)					
	2016		2018		2020	
	AM	PM	AM	PM	AM	PM
Rabe Ct. – Zaragoza Rd.	0.37	0.40	0.40	0.43	0.42	0.48
Commercial Drwy – Zaragoza Rd.	0.31	0.44	0.33	0.57	0.35	0.61
North Loop Dr. – Zaragoza Rd.	1.16	1.05	1.23	1.12	1.31	1.18
Betel Dr. – Zaragoza Rd.	2.26	1.98	2.41	2.10	2.55	2.23
Cristo Viene Dr. – Zaragoza Rd.	0.54	0.67	0.57	0.71	0.61	0.75
Escobar Dr. – Zaragoza Rd.	2.45	1.91	2.60	2.04	2.77	2.17
Warwick Rd. – North Loop Dr.	1.06	0.79	1.13	0.85	1.23	0.89
Muralla Way – North Loop Dr.	0.11	0.08	0.13	0.10	0.18	0.13

Table 12B – HCM Intersection Volume to Capacity Ratio (V/C) (With New Mixed Land Use Development)

Intersection	Analysis Year Volume to Capacity (v/c)					
	2016		2018		2020	
	AM	PM	AM	PM	AM	PM
Rabe Ct. – Zaragoza Rd.	-	-	0.40	0.43	0.44	0.49
Commercial Drwy – Zaragoza Rd.	-	-	0.34	0.57	0.37	0.61
North Loop Dr. – Zaragoza Rd.	-	-	1.24	1.12	1.37	1.31
Betel Dr. – Zaragoza Rd.	-	-	2.41	2.11	2.57	2.27
Cristo Viene Dr. – Zaragoza Rd.	-	-	0.77	0.72	1.44	1.20
Escobar Dr. – Zaragoza Rd.	-	-	2.60	2.04	2.79	2.19
Warwick Rd. – North Loop Dr.	-	-	1.13	0.85	1.23	0.89
Muralla Way – North Loop Dr.	-	-	0.52	0.33	1.85	2.21

Table 13A – HCM Driveway LOS (New Development)

Intersection/Driveway	Analysis Year LOS					
	2016		2018		2020	
	AM	PM	AM	PM	AM	PM
Driveway 1 – Cristo Viene	-	-	A	A	A	A
Driveway 2 – Muralla	-	-	A	A	A	A

Table 13B – HCM Driveway Delay (New Development)

Intersection/Driveway	Analysis Year Delay					
	2016		2018		2020	
	AM	PM	AM	PM	AM	PM
Driveway 1 – Cristo Viene	-	-	6.5	6.4	6.7	6.8
Driveway 2 – Muralla	-	-	5.0	5.0	5.0	5.0

Table 13C – HCM Driveway Volume to Capacity Ratio (V/C) (New Development)

Intersection/Driveway	Analysis Year Volume to Capacity (V/C)					
	2016		2018		2020	
	AM	PM	AM	PM	AM	PM
Driveway 1 – Cristo Viene	-	-	0.04	0.02	0.11	0.12
Driveway 2 – Muralla	-	-	-	-	-	-

5.0 CONCLUSION AND RECOMMENDATIONS

The HCM analysis identified that there was a traffic impact by the new mixed land use development as defined by the City of El Paso Chapter 19 of the Subdivision Regulations which states that “In cases where the level-of-service of the roadway network without the development is below a level-of-service D, the proposed development shall not increase roadway intersection delay.” The roadway (arterial) segment analysis did identify that the four segments approaching the Zaragoza/North Loop intersection are impacted based on the City’s Chapter 19 TIA criteria. In order to mitigate the segment impacts at the four approaches to the Zaragoza/North Loop intersection, it is our recommendation that the signal timing be revised.

The intersection analysis identified that the Muralla/North Loop and the Zaragoza/Cristo Viene intersections are impacted and would meet the City’s Chapter 19 TIA criteria for impacts to the roadway network analyzed for this traffic impact study. Muralla/North Loop intersection is the main access point to the new development and the analysis identified that a new traffic signal would mitigate the impact at that intersection. The Zaragoza/Cristo Viene intersection may be mitigated by reviewing the signal timing and adjusting it to improve the level of service.

Additionally, the intersection analysis identified that the Zaragoza/North Loop, Zaragoza/Betel and the Zaragoza/Escobar intersections are impacted and would meet the City’s Chapter 19 TIA criteria for impacts to the roadway network analyzed for this traffic impact study. Based on our observations on the signal timing, these intersections could be mitigated by making some modifications to the signal timing.